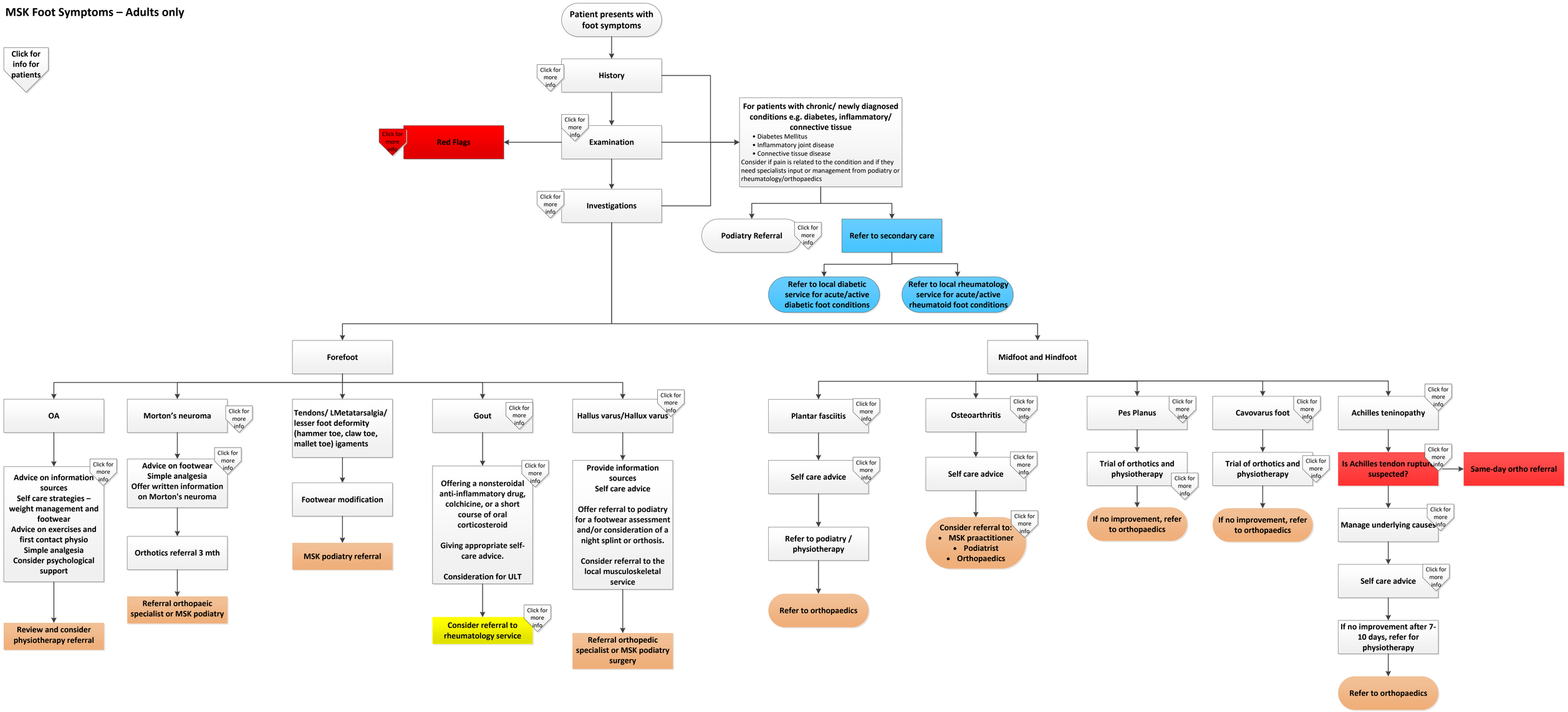
MSK Foot Symptoms – Adults only



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History

In particular note:

- pain:
  - if localised to a bony prominence it is likely to be due to a local disorder
  - diffuse pain across the forefoot is called metatarsalgia and is less specific
  - night pain
- deformity:
  - certain deformities e.g. flat foot, may be present, but otherwise, deformity may manifest as difficulty in regard to fitting shoes
- swelling:
  - localised, diffuse or bilateral
- trauma:
  - recently or in the past
- reduced functionality
- multiple joint pains

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Examination

1. INSPECTION
   - Watch the patient walk, observing for a normal heel strike, toe-off gait
   - Look at the alignment of the toes for any valgus or varus deformities
   - Examine the foot arches, checking for pes cavus (high arches) or pes planus (flat feet)
   - Check the symmetry, nails, skin, toe alignment, toe clawing, joint swelling and plantar and dorsal calluses
   - Finally should you inspect the patient's shoes, note any uneven wear on either sole and the presence of any insoles
   - NB: Note any obesity

2. FEEL
   - Check for temperature, comparing to the temperature of the rest of the leg
   - Palpate for tenderness
   - Feel pulses

3. MOVE
   - Assess all active then passive movements including midtarsal joints

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Investigations

Ottawa Rules with Respect to Ankle X-rays

An ankle x-ray at the medial malleolar zone B (from the tip is required only if there is any pain in malleolar zone and any of these findings:

- boney tenderness at the lateral malleolar zone A (from the tip of the lateral malleolus to include the lower 6 cm of posterior border of the fibular)
- boney tenderness p of the medial malleolus to the lower 6 cm of the posterior border of the tibia)
- inability to walk four weight bearing steps immediately after the injury and in the emergency department

Ottawa Rules with Respect to Foot X-rays

A foot x-ray is required if there is any pain in the midfoot zone and any of these findings:

- bone tenderness at Navicular bone (C)
- bone tenderness at base of the 5th metatarsal (D)
- inability to weight bear both immediately and in the emergency department

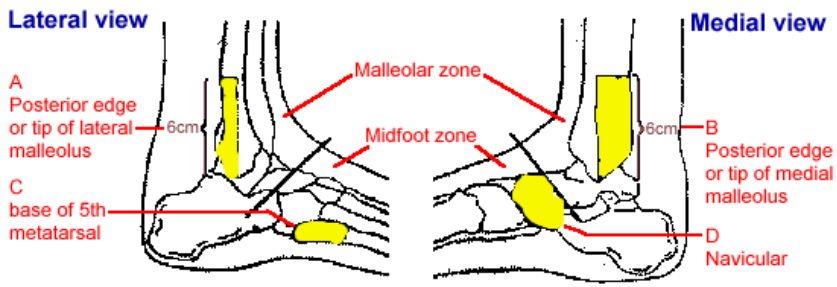
Other investigations

Bloods :

Consider: FBC, ESR, CRP, Hba1c and uric acid to exclude conditions such as osteomyelitis, gout, and inflammatory arthritis.

Morton's neuroma

An USS or MRI can confirm a diagnosis of Morton's neuroma (MRI is not usually necessary)



REF: https://cks.nice.org.uk/topics/sprains-strains/diagnosis/assessment/

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Red Flags

- Unexplained swelling, redness, pain; signs and symptoms of infection
- Systemically unwell (consider red flags of unexplained weight loss, night pain and high inflammatory markers)
- Unable to weight-bear
- Signs and symptoms of fracture
- Sudden acute leg pain
- Symptoms of Charcot foot: http://patient.info/doctor/neuropathic-joints-charcot-joints

NB:
- Suspected fracture/ dislocation/ infection - refer to A&E
- Suspected inflammatory condition - investigate and refer to rheumatology
- Suspected malignancy - refer on 2WW pathway (see Sarcoma pathway)

- Acute Achilles tendon rupture – discussion with ortho urgently
- Diabetic foot – urgent diabetic foot referral
- Infection/septic arthritis – A&E

Back to pathway

Osteoarthritis – self-care advice

- **Information and support for patients:**
  - Versus Arthritis (website available at www.versusarthritis.org)
  - The NHS/Versus Arthritis decision support tools Making a decision about hip arthritis and Making a decision about knee arthritis.
  - The NHS information leaflet Osteoarthritis.
  - The patient.info (website www.patient.info) patient information leaflet Osteoarthritis.
  - The British Society for Surgery of the Hand patient leaflet Arthritis at the base of the thumb.
- **Self-care strategies:.**
  - Weight management strategies if overweight or obese
  - Advise on appropriate footwear
- **Exercise / physiotherapy:**
  - Advise on local muscle strengthening and general aerobic fitness. Consider referral to a musculoskeletal first contact practitioner or the Versus Arthritis online 12-week programme of movement sessions, Let's Move with Leon
  - Consider supervised therapeutic exercise sessions.
- **Analgesia:**
  - Topical NSAID preparation such as ibuprofen 5% gel applied up to three times a day, or oral NSAID if topical preparations are ineffective and there are no contraindications
  - Advise on use of paracetamol or weak opioids such as codeine for infrequent, short-term pain management if all other drug treatments are contraindicated, not tolerated, or ineffective

References:

Scenario: Management | Management | Osteoarthritis | CKS | NICE

Back to pathway

Morton's neuroma

Clinical features
When should I suspect Morton's neuroma?

- **Typical symptoms** of Morton's neuroma include:
  - Pain in the forefoot, most commonly felt in the third inter-metatarsophalangeal space, less commonly in the second, and rarely in the first or fourth.
  - Pain whilst walking, exacerbated by increased activity or particular footwear, and relieved by removal of footwear and massaging the toes.
  - The sensation of having a 'pebble' or 'lump' under the metatarsal region when walking.
  - A sharp, stabbing, burning, or tingling sensation (sometimes described as feeling like an electric shock) in the distribution of the affected nerve.

Some people with Morton's neuroma may be asymptomatic, with the neuroma being detected as an incidental finding on examination of the foot for another reason.

- **On examination:**
  - Pain is elicited on applying pressure to the involved inter-metatarsophalangeal space.
  - Try to elicit Mulder's click:
    - Try to grip the neuroma between your forefinger and thumb (with your thumb on the plantar aspect of the foot).
    - With your other hand, simultaneously squeeze the metatarsal heads (1-5) together in the transverse plane.
    - A click can be felt and heard as the enlarged nerve subluxes between the metatarsal heads as they are compressed.
    - Absence of this sign does not rule out neuroma.
  - Loss of sensation to the affected toes is a strong indicator of Morton's neuroma, but a sensory deficit may not be apparent on examination.

Back to pathway

Morton’s neuroma advice

To avoid high heels and shoes with a constricting toe box or thin soles, to reduce pressure on the forefoot.
To use a metatarsal pad
Offer written information on Morton's neuroma, such as that available from the NHS website **https://www.nhs.uk/conditions/mortons-neuroma/**

References:
https://cks.nice.org.uk/topics/mortons-neuroma/management/management/

Back to pathway

Gout

- Gout should be suspected in people presenting with any of the following:
  - Rapid onset of severe pain together with redness and swelling in one or both metatarsophalangeal joints.
  - Tophi.
- Assessment of gout should include taking a medical history, examining the person, and measuring the serum urate level.
  - A serum urate level of 360 micromol/L (6 mg/dL) or more confirms the diagnosis.
- Risk factors:
  - Increasing age.
  - Hyperuricaemia
  - Family history of hyperuricaemia and gout.
  - Genetics.
  - Excess body weight or obesity.
  - Male sex.
  - Diet — consumption of excess alcohol, sugary drinks, meat, and seafood.
  - Menopausal status in women — gout is more common in postmenopausal women.
  - Some medicines (for example, diuretics, low-dose aspirin, or ciclosporin).
  - Comorbidities such as chronic kidney disease (CKD), hypertension, and diabetes mellitus.

Reference
https://cks.nice.org.uk/topics/gout/management/acute-gout/

Back to pathway

Gout management

- Offering a nonsteroidal anti-inflammatory drug, colchicine, or a short course of oral corticosteroid.
- Giving appropriate self-care advice.
- Urate-lowering therapy (ULT) using a treat-to-target strategy should be offered to people with gout who have:
    - Multiple or troublesome flares.
    - CKD stages 3 to 5 (glomerular filtration rate [GFR] categories G3 to G5).
    - Diuretic therapy.
    - Tophi.
    - Chronic gouty arthritis.

Reference
https://cks.nice.org.uk/topics/gout/management/acute-gout/

Back to pathway

Podiatry Referral

The current commissioned criteria for podiatry is:

- Diabetes see Diabetic Foot pathway
- Rheumatoid Arthritis plus associated conditions
- Peripheral Vascular Disease
- Peripheral Neuropathy
- Severe structural anomaly of the whole foot, congenital or acquired, requiring specialist treatment and management
- Ingrowing toenail or nail pathology requiring surgery under local anaesthetic
- Musculo-skeletal foot/leg problem in association with one of the above conditions - please elaborate on patients problem below

Note that requests for surgical footwear and splints should go to Surgical Appliances.

- Other – if you believe your patient to be high risk

Back to pathway

Osteoarthritis – self-care advice

- **Information and support for patients:**
  - Versus Arthritis (website available at www.versusarthritis.org)
  - The NHS/Versus Arthritis decision support tools Making a decision about hip arthritis and Making a decision about knee arthritis.
  - The NHS information leaflet Osteoarthritis.
  - The patient.info (website www.patient.info) patient information leaflet Osteoarthritis.
  - The British Society for Surgery of the Hand patient leaflet Arthritis at the base of the thumb.

Self-care strategies:.
Weight management strategies if overweight or obese
Advise on appropriate footwear
Exercise / physiotherapy:
Advise on local muscle strengthening and general aerobic fitness. Consider referral to a musculoskeletal first contact practitioner or the Versus Arthritis online 12-week programme of movement sessions, Let's Move with Leon
Consider supervised therapeutic exercise sessions.
Analgesia:

Topical NSAID preparation such as ibuprofen 5% gel applied up to three times a day, or oral NSAID if topical preparations are ineffective and there are no contraindications
Advise on use of paracetamol or weak opioids such as codeine for infrequent, short-term pain management if all other drug treatments are contraindicated, not tolerated, or ineffective

References:
Scenario: Management | Management | Osteoarthritis | CKS | NICE

Back to pathway

Information for patients (diagnoses)

Common causes of foot pain, NHS Choices: http://www.nhs.uk/conditions/foot-pain/Pages/Introduction.aspx

Heel and Foot Pain (Plantar Fasciitis): http://patient.info/health/heel-and-foot-pain-plantar-fasciitis

Heel pain: http://www.nhs.uk/conditions/heel-pain/Pages/Introduction.aspx

Patient advice to support conservative management

Treating sprains and strains: http://www.nhs.uk/Conditions/Sprains/Pages/Treatment.aspx

Exercises to Manage Foot Pain: http://www.arthritisresearchuk.org/arthritis-information/conditions/foot-pain/foot-pain-exercises.aspx

Choosing Appropriate Footwear: http://www.arthritisresearchuk.org/arthritis-information/common-pain/foot-pain/footwear.aspx

Preventing Foot Pain: http://www.webmd.boots.com/foot-care/features/5-nice-things-feet

Back to pathway

Consider referral if:

- The diagnosis of gout is uncertain.
- The response to treatment has not been adequate or the treatment is not tolerated.
- Treatment is contraindicated.
- They have CKD stages 3b to 5 (GFR categories G3b to G5).
- They have had an organ transplant.

Reference
https://cks.nice.org.uk/topics/gout/management/acute-gout/

Back to pathway

Hallus varus/Hallux varus

- A bunion (hallux valgus) describes a toe deformity when the great toe (hallux) laterally deviates away from the midline towards the lesser toes.

Sources of information for patients

- The NHS Website: https://www.nhs.uk/conditions/bunions/
- The Patient: https://patient.info/foot-care/bunions
- The Royal College of Podiatry leaflet https://cop.org.uk/common-foot-problems/what-are-bunions

References
https://cks.nice.org.uk/topics/bunions/management/bunions/

Back to pathway

Plantar fasciitis – Clinical Features

- Symptoms:
  - Insidious onset of heel pain.
  - Intense heel pain during the first steps after waking or after a period of inactivity, with relief upon initiation of movement.
  - Pain that reduces with moderate activity, but worsens later during the day or after long periods of standing or walking.
- Risk factors:
  - Age 40–60 years
  - overweight or obesity
  - Running, prolonged standing or walking.
- Signs:
  - Tenderness on palpation of the plantar heel area (particularly, but not always, localized around the medial calcaneal tuberosity).
  - Limited ankle dorsiflexion range (with the knee in extension).
  - Positive 'Windlass test' (reproduction of pain by extension of the first metatarsophalangeal joint).
  - Tightness of the Achilles tendon.
  - An antalgic gait (abnormal walking to avoid pain) or limping.

References:
Diagnosis | Diagnosis | Plantar fasciitis | CKS | NICE

Back to pathway

Plantar fasciitis | Self-care advice +/- steroid injection

- **Information for patients on plantar fasciitis.**
  - Explain that most people will make a complete recovery within a year.
  - Patient information is available from the NHS website
- **Give self-care advice to relieve foot pain, promote healing of the fascia, and /or prevent future episodes.** Advise the person to:
  - Rest the foot (by avoiding standing or walking for long periods
  - Wear shoes with good arch support and cushioned heels (such as laced sports shoes).
  - Avoid walking barefoot.
  - Consider purchasing insoles and heel pads to insert in their shoes, with the aim of correcting foot pronation.
  - Lose weight if overweight
  - **Give advice on measures to provide symptom relief.**
    Simple analgesics, such as paracetamol (with or without codeine) and NSAIDs
  - Advise the person to apply an icepack (covered with a towel) to the foot for 15–20 minutes
  - Recommend self-physiotherapy

Reference: https://cks.nice.org.uk/topics/plantar-fasciitis/management/management/

Back to pathway

Osteoarthritis – clinical features

Symptoms:
Activity-related joint pain that develops over months or years
Usually only one or a few joints affected at any one time
No morning stiffness or morning stiffness lasting no longer than 30 minutes.
Functional limitation.

Signs
Bony swelling and joint deformity.
Small-to-moderate joint effusion
Soft tissue swelling, warmth, and/or tenderness
Muscle wasting and weakness.
Painful and reduced joint mobility with crepitus
Joint instability and misalignment.

References:
Diagnosis | Diagnosis | Osteoarthritis | CKS | NICE

Back to pathway

Osteoarthritis – consider referral

- **Consider referral to a physiotherapist or musculoskeletal team for**:
  - Further advice on exercise (including local muscle strengthening and general aerobic fitness) and pacing of activities.
  - Additional manual therapy (such as joint manipulation, mobilisation, or soft tissue techniques)
  - Provision of protective joint supports, splints, braces, gloves, and sleeves to reduce the load for joint pain or instability.
  - Intra-articular corticosteroid injections if other drug treatments are ineffective or unsuitable or to support therapeutic exercise
- **Consider referral to a podiatrist for:**
  - A biomechanical assessment of joint pain — altered use of joint because of pain in a different joint
  - Advice on orthotic devices, such as appropriate footwear and insoles, .
- **Consider referral to an orthopaedic surgeon if non-surgical management is unsuitable or ineffective after 3 months, for consideration of joint surgery,** depending on clinical judgement, if:
  - Symptoms are significantly impacting quality of life.
  - There is diagnostic uncertainty or atypical features.
  - Initial management strategies are ineffective or unsuitable.
  - There is a sudden worsening of symptoms.

Reference: https://cks.nice.org.uk/topics/osteoarthritis/management/management/

Back to pathway

Pes Planus – Clinical features

History

- Pain and swelling inferior and posterior to the medial malleolus
- Medial arch pain
- Appearance of foot becoming progressively flatter
- Forefoot deformities: hallux valgus, metatarsalgia, lesser toe deformities
- Tarsal tunnel syndrome
- History of diabetes, rheumatoid arthritis, osteoarthritis, previous trauma
- Neurological / vascular symptoms

Examination

- Medial arch collapse and hindfoot valgus
- Tenderness and/or swelling posterior to medial malleolar tip with no palpable tendon on resisted plantar flexion/inversion
- Ask patient to attempt repeated single heel raises – may be able to do it once but not repeatedly
- Assess TP power against resistance (resisted inversion)
- Signs of secondary arthritis, esp. in hindfoot and ankle joints (joint tenderness, possible osteophytes, crepitus, reduced range of movement/ fixed deformity)

Reference:
https://www.bofas.org.uk/hyperbook/midfoot-hindfoot-disorders/pes-planus

Back to pathway

Pes planus – trial of orthotics and physiotherapy

Please see the following links for further information:

https://www.bofas.org.uk/hyperbook/midfoot-hindfoot-disorders/pes-planus

https://purephysiotherapy.co.uk/conditions/adult-acquired-flatfoot/

Back to pathway

Cavovarus foot – clinical features

- Full neurological exam (usually due to a neurological condition e.g. Charcot-Marie-Tooth)
- Examine the lumbar spine for scars, hair at the base of the spine and scoliosis
- In the unstable ankle, look for a subtle cavo varus deformity

Ref:
https://www.bofas.org.uk/hyperbook/midfoot-hindfoot-disorders/cavovarus-foot

Back to pathway

Cavovarus foot – trial of orthotics and physiotherapy

Visit link for further information: https://www.bofas.org.uk/hyperbook/midfoot-hindfoot-disorders/cavovarus-foot

Back to pathway

Is Achilles tendon rupture suspected?

- **Symptoms:**
  - Sudden pain in the back of the leg +/- audible snap during sporting activity or running.
  - Aching of calf, swelling, mild bruising, and weakness when pushing off with foot.
  - Difficulty with weight bearing.
- **Examination:**
  - **Use Simmonds triad (angle of declination, palpation, and the calf squeeze test) to help exclude Achilles tendon rupture:**
    - Ask the person to lie prone with their feet over the edge of the couch
    - Look for an abnormal angle of declination — rupture of the Achilles tendon may lead to greater dorsiflexion of the injured ankle and foot.
    - Feel for a gap in the tendon.
    - Squeeze the calf muscles — the injured foot will remain in the neutral position.

Reference: https://cks.nice.org.uk/topics/achilles-tendinopathy/diagnosis/diagnosis-of-achilles-tendon-rupture/

Back to pathway

Achilles tendinopathy – clinical features

- **Symptoms**:
  - Aching / sharp pain in the heel +/- swelling. Pain is aggravated by activity or palpation and may be preceded by trauma
  - Stiffness in the morning or after prolonged sitting.
- The Victorian Institute of Sports Assessment-Achilles (VISA-A) questionnaire can be used to assess symptom severity.
- Ask about risk factors such as diabetes mellitus, dyslipidaemia, and fluoroquinolone use. Arrange investigations (such as lipid profile or HbA1c) if there is a suspected underlying cause.
- **Examination:**
  - Look for redness, swelling, and asymmetry.
  - Palpate along the length of the tendon for tenderness, heat, crepitus, thickening, and nodularity.
  - Evaluate the range of motion of the ankle. Pain worsens with passive dorsiflexion of the ankle.
  - Assess function by asking the person to hop and do heel-raise endurance tests, as appropriate.
- **Usually a clinical diagnosis** - imaging is not routinely needed in primary care.
- **Arrange investigations** (such as lipid profile or HbA1c) if there is a suspected underlying cause.

References:

Diagnosis of Achilles tendinopathy | Diagnosis | Achilles tendinopathy | CKS | NICE

Back to pathway

Achilles tendinopathy – manage underlying causes

- Discontinue fluoroquinolone antibiotics
- Manage Hypercholesterolemia with lifestyle advice +/- statins
- Optimise diabetes mellitus management

Reference: https://cks.nice.org.uk/topics/achilles-tendinopathy/management/management/

Back to pathway

Achilles tendinopathy – self-care advice

- Cold packs or ice can be applied to ease symptoms
- Paracetamol for pain relief. NSAIDs may be useful for analgesia in the acute phase but are not recommended long term.
- Rest — reduce or stop the activity that precipitated the injury. Exercise can be restarted when pain allows.
- Weight bear as tolerated.
- **Do not inject corticosteroids into or around the tendon.**

Resource: https://cks.nice.org.uk/topics/achilles-tendinopathy/management/management/